

Special Issue

Perovskite Materials: Structure, Properties and Applications

Message from the Guest Editors

Perovskite materials, with their exceptional optoelectronic properties, have emerged as revolutionary semiconductors, driving rapid advancements in photoelectric device technologies.

This Special Issue focuses include strategies to enhance device efficiency and long-term stability, novel material engineering approaches (e.g., composition modulation, 2D/3D heterostructures, and tandem architectures), and scalable manufacturing techniques. Additionally, we welcome studies exploring emerging applications, such as flexible/wearable devices, transparent electronics, and integrated optoelectronic systems. The issue will also highlight interdisciplinary efforts bridging material science, device physics, and engineering, including advanced characterization methods (e.g., in-situ/operando spectroscopy, AI-driven material discovery) and theoretical modeling.

We invite original research articles, reviews, and short communications that offer novel insights into material design, device optimization, and real-world applications, accelerating the path toward a perovskite-powered future.

Guest Editors

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About the Journal

Message from the Editor-in-Chief

Welcome to *Crystals*, the journal dedicated to the fascinating world of crystallographic research! Crystals are more than mere decorative elements; they hold the key to understanding the fundamental structure of matter. Our mission is to explore the crucial significance of this research across various fields. From medicine to technology, chemistry to geology, crystals play a vital role. Their structure provides insights into new advanced materials, innovative drugs, and groundbreaking technologies. Through *Crystals*, we delve into the microscopic world to discover solutions that will shape the future. Join us on a journey through the crystal, where science merges with beauty and innovation.

Editor-in-Chief

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